REMARKS

Claims 1-24 have been canceled. Claims 25-28 remain for reconsideration. Claims 29-30 have been newly added.

Briefly, the present invention is directed to a thermo-optic switch. A thermo-optic switch comprises two planar waveguides and a heating element couple to at least one of the planar waveguides. Typically, wire bonding is the technique used for making the connection between the power supply and the heating elements. According to embodiments of the present invention, the heating element is coupled to a package substrate using solder bumps. In the example of Figure 1, one end of the heating elements 110, 112 makes contact with conductive strips 151 and 152, respectively, and the other end of the heating elements 110, 112 makes contact with conductive strip 153 as a "common", which in one embodiment may be coupled to a common ground. Accordingly, this simplifies the procedure for manufacturing higher order matrix thermo-optic switches (TOS) as well as allows TOS packages to be surface mounted.

All claims presently pending are directed to a thermo-optic switch such as that shown in Figure 1.

All claims stand rejected under 35 U.S.C. 102(b) as being anticipated

by U.S. Patent 6,546,173 to Case. This rejection is respectfully traversed. As understood, Case is directed to an optical module. The module includes an optical component and relative reference mount. The optical component is fixed spacially relative to a registration feature. The registration feature is configured to couple to a fixed reference mount.

In contrast to Applicant's claimed invention, Case is not directed to optical switches, but rather just an optical module mounting technique. Case does mention "heating elements" however, it appears that these elements are used for the purpose of melting the solder and not used in connection with heating elements for waveguides used for a thermal optic switch.

Claim 25 recites "A thermo-optic switch comprising: a first substrate having a first waveguide; a heating element in proximity to the first waveguide; and a package substrate solder bonded to the first substrate via the heating element" (emphasis added).

Similarly, independent claim 29 recites "A 2x2 thermo-optic switch, comprising: a first substrate having a first waveguide and a substantially parallel second waveguide separated by a distance; a first heating element in proximity to the first waveguide; a second heating element in proximity to the second waveguide; and a package substrate comprising: a first conductive strip solder bonded to said first heating element; a second conductive strip solder bonded to said second heating element; and a third common conductive strip

spanning said distance and solder bonded to both said first heating element and said second heating element" (emphasis added).

MPEP § 2131 mandates that "TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT IN THE CLAIM". Furthermore, the MPEP, citing Richardson v. Suzuki Motor Co., 9 USPQ2d 1051, 1053 (Fed. Cir. 1987), states "[t]he identical invention must be shown in as complete detail as is contained in the... claim" (emphasis added).

It is therefore respectfully submitted that the rejections to the claims are improper under Section 102 as Case cannot anticipate the rejected claims since it does not "teach the identical invention". Based on the above discussion with reference to the MPEP guidelines, it is respectfully requested that the rejections based on 35 U.S.C. § 102 be withdrawn. Furthermore, since thermo-optic switches are not taught or suggested by Case, Case also fails to show *prima facie* obviousness under §103.

This being the only rejection to the claims it is respectfully requested that these claims be allowed.

In view of the foregoing, it requested that the application be reconsidered, that claims 25-30 be allowed and that the application be passed to issue.

Respectfully submitted,

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